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UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

LOOSE-LEAF FIELD NOTEBOOK

B-137

Field Notes - K. M. Waage

Georges Creek Basin

Holes 23 to 26

Casselman Basin

Hole 39

Georges Creek Basin

Hole 23

0 to 43	Surficial material
47-9	Claystone, weathers yellowish (may have iron lumps)
71	Silty clay shale and argillaceous siltstone
73	Siltstone
78-6	Light gray shale, 3" black shale zone - foot above base
80	Black shale
84	Siltstone, 1' silty shale at base.
92	Silty dark gray bentonitic clay, limey pellets
100	Greenish gray bentonitic clay, rest, shale top and base, limey pellets.
106-6	Fine sandstone, minor siltstone at top.
113	Siltstone, dk gd, fine, ripple cast
117-6	Mottled gray & green clay shale, silty six upper half, lower 2' fossiliferous
118-9	Fossiliferous limestone.
129	Greenish clay shale, local limestone concretions.
132	Hard black shale, fossil wood
132-7	Fossiliferous limestone
139	Gray silty clay shale
152-4	Interbedded dark gray shale and fine sandstone.
153-11	Coal (Harlem)
179	Carbonaceous claystone, limestone pellets.
184	Gray bentonitic clay.
210	Greenish shale and bentonitic clay limestone inclusions at top and base.
212	Silty claystone
229	Fine grained sandstone
242	Gray claystone, locally silty clay shale at top & at base.
243-1	Coal
243-9	Argillaceous limestone
247-5	Carbonaceous bentonitic clay grading to siltstone.
260-8	Fine grained sandstone, locally cross laminated.
275-3	Interbedded silty shale, siltstone and fine sandstone.
276-9	Gray to black gray shale.
281-1	Coal

282-3	Shaly clay stone
287-8	Clay stone with limestone inclusions and seams. 1' stony clay stone at base,
288-8	Flint and semiflint. (6423-1)
293-4	Fine sandstone shaly siltstone top + base.
301	Gray clay shale
305	Bastard clay limestone pellets.
311	Silty clay stone grading to siltstone
316-2	Fine sandstone, interbedded siltstone in upper half
323	Gray and greenish bastard clay.
335	[illegible] siltstone and silty clay stone.
342	Interbedded fine sandstone and siltstone
366-6	Fine to medium sandstone.
372	Gray shale.
376-4	Silty clay stone & siltstone, zones of sandstone
391-C	Calcareous clay stone and bastard clay.
392-3	Gray clay stone and silty clay stone, [illegible] at base
395	Fine sandstone with [illegible]
397	Silty clay stone
409	Silty to shaly shale, [illegible]
415-8	Fine sandstone
419	Interbedded siltstone and sandy siltstone
422-6	Interbedded fine sandstone & dark shale
424	Dark gray shale with black [illegible]
424-7	Carbonaceous shale
427-10	Coal (Herrin)
440-7	Dark silty clay stone ÷ clay stone some limey pellets in upper 1'
450	Shaly siltstone & silty shale
453-3	Fine sandstone
460-8	Silty clay stone & siltstone locally shaly
466-4	Interbedded shaly siltstone and fine sandstone
468	Fine sandstone
470-8	Black shale

614-7 to 616 S. lt. olive to silty flint. (GC 235)

616 – 618 Dark brown sandstone + flint, locally fragmental (GC 236)

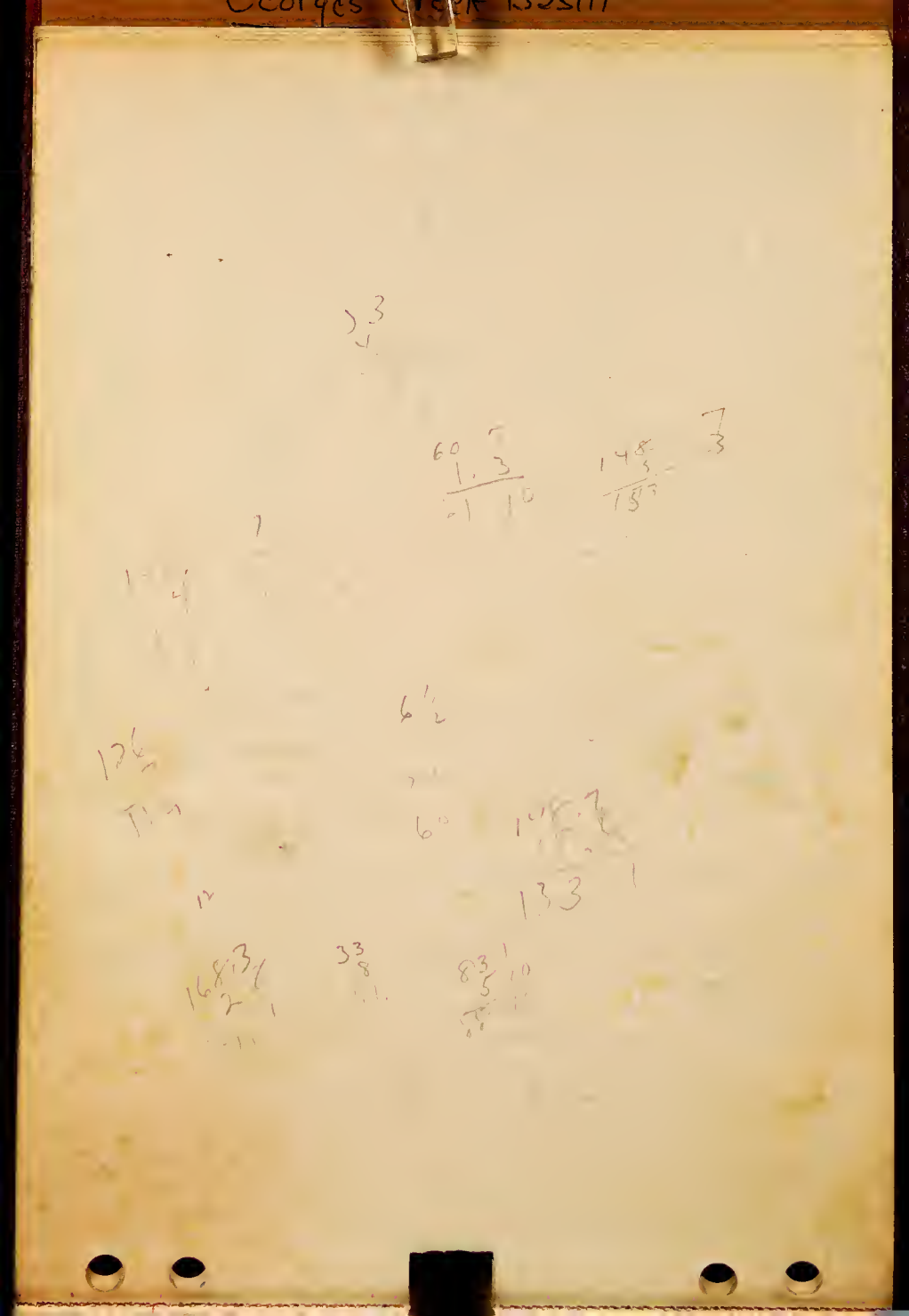
Level 36

471-7	Coal
473-4	Carbonaceous clay } Davis
476-10	Coal
478-10	Dark to light gray clay stone and silty clay stone locally calcareous. (GC 232)
490-10	Argillaceous siltstone and silty claystone, calcareous stringers.
495	Arkosic poorly bedded fine sandstone
501-10	Semi hard fragmental clay, calcareous stringers and thin beds of limestone in upper 1½ feet. ↑(GC 233)
510	Claystone grades to siltstone.
517-9	Irregularly interbedded fine sandstone and siltstone (siltstone fragmental in lower part)
522-4	Fragmental siliceous claystone (tuff) interbedded siltstone (GC 234)
524	Shaly bastard clay
530	Gray to dark gray claystone and shale claystone
530-6	Carbonaceous shale, coaly streaks.
535	Bastard clay and claystone.
536	Limestone
536-6	[illegible] clay [illegible]
542	Silty claystone [illegible] siltstone
552	Interbedded shaly siltstone, [illegible] and sandstone
554	Gray to black [illegible]
555-5	Coal
556-8	Calcareous [illegible]
559-2	Dark flint clay
579-3	[illegible]
587	Med-g [illegible]
610	" g " [illegible]
611	[illegible]
614-7	Coal
618	Rusty [illegible]
628-7	Siltstones and interbedded sandstones, [illegible] at top.

670	Med to coarse sandstone, [illegible] rough.
676-6	Shaly silty clay stone grading to shaly siltstone, dark gray.
681.5	Dark gray silty shale
684.6	Coal
687-6	Lt gray siltstone
731	Fine to med quartzitic sandstone, local coarse zones, [illegible]
737-1	Irregularly bedded sandstone with pebbles and shales
739-0	Dark bone, coal streaks
741-4	Interbedded carb. shaly shale and conglomeratic sandstone
747	Med. grained, shaley, quartzitic sandstone
750	Conglomerate and conglomeratic sandstone

T.D. 750

George Clark 1325111

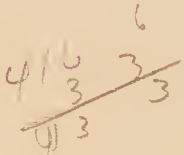


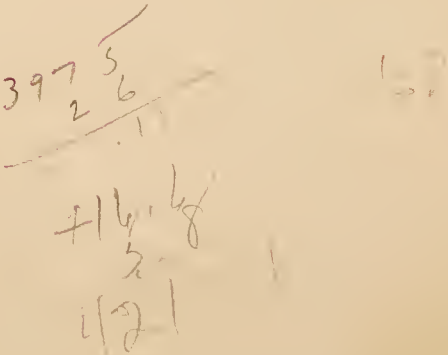
Hole 24 El. 250' (?)

0 - 33	overburden
41	silty claystone, last foot mottled red & green
47-8	gray silty claystone
49-9	gray siltstone
61-10	light gray to white fine gr. sandstone
70	gray, medium gr. ss., micaceous in part
72	med. gray silty claystone
74	dark gray to black claystone to shaly claystone
76-6	med. gray slightly silty claystone
82-9	carb. clay grading to black shaly claystone
83-1	COAL
84	med. gray silty claystone grading to claystone
90-9	gray claystone
102	dark brown to black crumbly claystone
1.0	gray to grayish brown claystone
119	gray siltstone
131	white fine gr. clastic sandstone
133	gray claystone
144-2	green, dense, massive claystone
153-10	lt. gray fragmental, carbonated brown silty sandstone with scattered siderite pellets. (CC 241)
170-11	black slightly silty claystone
175	brown to black bastard clay
181	green silty claystone
197	dark gray to black, carbonaceous claystone
198-6	black shaly claystone
202	gray laminated silty claystone
203.3	black clayey shale
205.5	COAL
216	black, carbonaceous claystone
223.1	black silty claystone with interbedded sandstone
225.8	COAL
227	dark brown to black carbonaceous claystone
230	dark brown calcareous, silty claystone
231	black silty claystone
233	dark gray [illegible] siltstone

iron stained

237 light gray "bastard" clay to silty claystone
242 light tan fragmental claystone ... signs of flint clay. (GC 242)
251 tan and light gray fragmental silty claystone
254 dark gray silty claystone
257 fragmental claystone, flinty clay
262-6 silty claystone (GC 243)
263-6 black carbonaceous claystone
266 fragmental claystone
279-7 greenish gray silty claystone to siltstone
281-6 COAL
286-5 gray shaly claystone
287-2 black shale
290-1 COAL
290-10 black carbonaceous shale
291-7 calcareous [illegible]
297 dirty gray siltstone; siderite layer in middle of unit
306 gray silty claystone
311 gray and white siltstone Upper Wallaby?
313 Gray silty claystone
315-8 black shale
316-3 bone with coaly seams; pyritic
319-7 light gray massive silty claystone with interbedded siltstone
362 white fine-gr sandstone, floral remains; last three feet siltstone with coal parting
366-6 dark brown to black "bastard" clay; siltstone; bluish-gray massive, with a sandstone layer spotadically
393-6 interlaminated fine-gr sandstone and siltstone
394 black carb. shale
397-5 COAL





397-1	black carbonaceous "bastard" clay
399-5	light tan ironstone
407	brownish-black "bastard" clay
409-3	black carbonaceous shale
413-3	dark brown carbonaceous claystone
418-6	black carbonaceous claystone
422-2	interbedded sandstone and siltstone with coaly partings.
466	white fine to medium-grained sandstone
470	coarse grained sandstone - gray, fine-grained laminations
494	conglomerate
504-9	coarse gr. sandstone - coaly partings fine grained sandstone and conglomeratic zones throughout.
524	Dark gray to black shaly claystone
537	Dark gray siltstone with fragments of claystone in portions
547	white medium-gr. sandstone
552-6	black silty, shaly claystone
578	gray silty claystone to siltstone
588	fine-grained sandstone
591	gray, siltstone
593-2	gray, fine-grained sandstone
601	medium-grained sandstone with numerous coaly partings and seams, & dark fragments of dark gray siltstone

T. D. 601

Hole 25

0 - 41	Overburden
45	Silty clay with limestone pellets.
53	Light gray siltstone, many streaks of limestone.
62	Shaly - bottom clay
64	Argillaceous limestone
70	Shaly limestone, nodular concretions in upper part
71	Calc. shale, coaly at base at times
72	Dark gray shaly, shaley siltstone, local sandy streaks and lenses.
102	Calcareous silty clay and claystone, limey pellets
114	Calcareous claystone, silty claystone and siltstone, locally calcareous stringers & pellets.
116	Argillaceous limestone
123-6	Clay & claystone with limestone nodules
126	Siltstone, 6" fine sand at top
131-6	Argillaceous siltstone grading to claystone as coarser in lower 1½' part
139	Dark shale, light gray, sandy zones.
144-6	Dark gray limy claystone and argillaceous siltstone. Coal nodules.
147-6	Shaly shale in grading to dark shale.
149	Silty gray shale
151-6	Shaly limestone
154-2	Dark gray marl, salty
155-1	Coal
170	Calcareous & carbonaceous clay and claystone, micaceous argillaceous limestone. Limestone pellets throughout.
176-6	Claystone grading to siltstone, streaks and pellets of siderite.
193	Calcareous shaly siltstone and fine sandstone.
205	Gray shales with plant fragments.
233	Dark gray shales, marine fossils
233-6	Coal. (Harlem)

Georges River Basin

255 -	argillaceous limestone grading to calcareous claystone, small pellets of limestone throughout.
260	Silty fractured clay, greenish, calcareous in upper 1'.
279	Fine grained sandstone, silty in upper 3'. Calcareous in lower 2'.
285	Shaly siltstone, calcareous streaks, interbedded ironstone and calcareous sandstone in lower 2'.
295	Shaly siltstone
306	Silty gray shale, plant remains, coaly partings.
310	Fine grained sandstone shaly partings.
313-8	Gray to carbonaceous shale.
317-1	Coal
318	Limestone, argillaceous
322-6	Silty claystone & fractured clay, pyritic, limestone nodules.
326	Silty claystone and siltstone
329	Silty claystone
336-6	Calcareous claystone & argillaceous limestone, limestone pellets throughout.
345-6	Silty clay and claystone, minor argillaceous siltstone
349-6	Silty, micaceous, calcareous, fractured clay
349-7	Coal & shale.
353	Dark gray shaly siltstone, plant fragments.
367	Dark gray to black shale.
369	Coal (Lower Bakerstown)
371-6	Silty, slightly calcareous clay & claystone
377	Cryptocrystalline limestone and limey claystone.
394	Gray claystone and silty claystone, limey fossiliferous stringers. 1' fragmental limestone at top.
395-6	Silty fractured clay.
400	Light gray siltstone minor silty claystone
404-4	Fine sandstone.
407-6	Shaly claystone

Georges River Basin

418	clutterbedded siltstone and fine sandstone.
427	Silty to sandy, dark shale with irregularly interbedded fine sandstone, latter [illegible] in upper part.
438	Dark gray to black shale (fossil fragments at base)
443	Dark gray siltstone.
477-5	clutterbedded fine wk tie sandstone [illegible] and dark gray silty shale.
481-9	Coarse conglomerate split by seam of dark carbonaceous sandstone + siltstone.
487-6	Gray shale
490	Calcareous clay + shale, marine fossils, 6" limestone at top.
493	Black shale, marine fossils
494-3	Coal, (Brush Creek)
500-9	Silty claystone, limestone inclusions
515-	Siltstone + argillaceous siltite &c.
535-6	~~Claystone~~, Silty, claystone, shaly at base.
536	Coal bone + dark silty clay
536-8	Limestone
540	calcareous claystone, limestone inclusions and iron concretions
547	Siltstone and silty claystone, limey at base
555	Calcareous claystone and argillaceous limestone.
562-6	Siltstone grading to shaly siltstone.
573	Medium grained sandstone, 2' shaly zone in middle part.
577	Silty to sandy gray shale
591	Medium grained (micaceous) sandstone
592-8	Gray shaly, sandy, siltstone.
593-6	Black pyritic shale.
595-6	Coal
599	Silty dark clay + claystone very fine calcareous specks in lower half.
601-6	Silty claystone, limestone inclusions.
619-6	Gray siltstone, calcareous at [illegible] 3' fine sandstone at base.

George's Creek [illegible]

✓ 699 to 701(-1)
☆ [illegible] -10
☆ [illegible] 135-6
✓ [illegible] 611-8

699 to 701

699 to 699-5 Siluroos grey clays[illegible]
dark sandy gens. (P 254)

699-9 clay[illegible]
and coals[illegible]
P 253

700-8 Matt[illegible]
claystone + [illegible]
dark Fe stones

701 [illegible]
at base (P 254)

(1) [illegible] complete

[redacted]

608-6
645-3

645-3 Gray siltstone and sandy siltstone.
648-6 Dk gray to black claystone + silty clay, sandy in upper 6", some limey inclusions at base.
650-10 LF Plastic + laminated clay, local ironstone, (GC 251) #
657 Silty shale + siltstone, minor sandy streaks.
660-11 distinctly bedded shale and sandstone
661 Coal.
664 Silty carb to gy claystone (root impressions)
675 distinctly bedded silty shale + fine sandstone.
678 Dk gray to black pyritic shale, coaly streaks at base
681 Gray silty clay (rooted impressions) grading to siltstone.
687 Gray silty shale + shale, plant remains.
693-2 Limestone
694-3 Claystone, gray
697 irregularly bedded fine sandstone, + argillaceous siltstone.
705-6 distinctly bedded claystone, silty + sandy claystone and some plant + siderite plant.
711 distinctly bedded shaly + siltstone + fine sandstone
736-6 Medium-grained sandstone, shale inclusions in lower foot.
739-6 Gray to blk shale, coaly at base
740-4 Fine sandstone
745-6 (3'+ covered) upper part carb. claystone, some root frags, vertical crevices, locally flint clay.
753 Siltstone grading to silty claystone and silty sandy hard clay.
755-6 Sandy clay (Anal. 3' GC 256
756-2 Silty flint clay 3" ironstone at base.
759-6 Silty claystone grading to siltstone.
771-2 distinctly bedded fine sandstone + siltstone + siltstone.
805-3 Medium to coarse grained cherty sandstone
807-2 Coal.

Georges Perec Estate

810-6 to 811-2

811-3 to 811-8

807-7	Black shale
810	Silty clay stone, fossiliferous, fine nodules (?) pellets + some larger grains
810-6	Silty, semi-flint clay, fragmented with scattered larger grains
811-8	Same - flint clay
811-10	Chamosite
812-7	Carbonaceous, stony clay shale (Fe as thin pellets, nodules + grains pyrite)
814-7	Silty clay (rootlet impressions)
822-5	Siltstone
833	Fine to med. conglomerate with streaks + partings of silty shale
856	Medium grained [illegible] cross bedded sandstone
86-	Silty stony shale, 2 limestone stony
87[illegible]	Dark grey to black [illegible] shale, limestone concretionary
872	Stony coal (Coaly shale)
872-1	Dark grey silty clay shale, coaly streaks
873	Stony coal
875-2	Dark grey to black [illegible] shale
875-9	Stony coal (Coal + shale)
876-6	Shale
885	Fine sandstone with shaly streaks and partings.

Courses Taken 1939-41

Hole 26

0-18	overburden
18-5	ironstone
24-4	gray iron-stained siltstone, splits in horizontal layers. A 4" ironstone in middle of unit.
25-4	iron-stained sandstone with thin gray streaks throughout.
26-9	gray iron-stained siltstone, splitting fairly easily. Interbedded with sandstone in upper portion. shaly
30-1	dark gray to black sil.ˢtone; iron-stained.
38-7	dark gray to black shale ~~with more or less fissility.~~
40-7	dark brownish-black to black claystone. Breaks into angular pieces rather easily. Thin streaks of hard black shale within unit.
41-3	ironstone
55-3	dark gray to black "dirty" clay with interbedded black shale horizons.
56-1	limestone with a thin streak of gray claystone.
56-3	black carbonaceous claystone
57-1	COAL
57-9	black carbonaceous shaly claystone to shale
59-11	limestone somewhat carbonaceous at top.
61-1	calcareous claystone
64	light gray siltstone with limy stringers
69-4	light gray shaly siltstone with wavy streaks
71-5	dark gray to black shaly siltstone with sandy streaks. Iron stained.
72-9	black carbonaceous siltstone with shaly partings and nests of pyrite.
78-9	limestone. Quite hard.
82-7	slightly silty gray claystone with numerous large inclusions of limestone
86-5	Dk. gray easily broken claystone with black inclusions throughout.

At 83-6 a very silty light tan impure ~~clay~~ clay streak.

96-5 very closely laminated siltstone. Some thin sandy horizons. Laminations show contortion at 87.

97 calcareous siltstone

110 dark brownish-black to black shaly siltstone. Some iron-staining and few nests of pyrite.

111-5 limestone. Dense, finely grained.

117-7 gunmetal-gray friable claystone. Gets silty and shaly toward end of unit.

118 carbonaceous shale with coaly seamlets. Two narrow calcareous streaks

118-6 COAL

120-1 Black silty claystone with questionable impure silty ~~fire~~ clay at top. Coaly surfaces shown on breaking upper part

122 limestone grading to calcareous claystone

127-8 gunmetal-gray claystone. First foot or so somewhat calcareous. Around 123 there are abundant fragments of siderite. In lower portion ironstone layers common

129-6 calcareous claystone

136 gray silty claystone to shaly siltstone

137 fine-grained sandstone

138-8 coarse-grained gray siltstone.

159-2 white, fine- to medium-grained sandstone

162 light gray to dark gray slightly silty claystone

169-3 dark gray argillaceous limestone

170-3 dark gray silty claystone. Dendritic black streaks

179-5 light greenish-gray silty claystone to siltstone varying throughout in silt content. Many branching

iron-stains.

180-11 greenish-gray calcareous siltstone

181-10 fragmental ~~shale~~ clay. Dark olive drab and black mottled, silty claystone. Angular fragments throughout. Very slightly micaceous.

185 calcareous siltstone

194 clayey-laminated siltstone

214-1 medium to dark gray siltstone, not much laminated. 1 4" fine-grained sand streak at 197-6

227-3 closely-laminated siltstone. Laminations exhibit cross-bedding and disconformity

228-7 dark gray siltstone

229-5 COAL

230-4 dark gray carbonaceous siltstone. Coaly fracture surfaces

237-10 limestone; pure buff dense argillaceous-impure to the pure limestone with abundant small fragments of gray silty claystone. Few small shale inclusions. Gets siltier with depth. black at bottom.

245 light-colored limestone.

248 Gray slightly silty claystone

252-3 impure limestone.

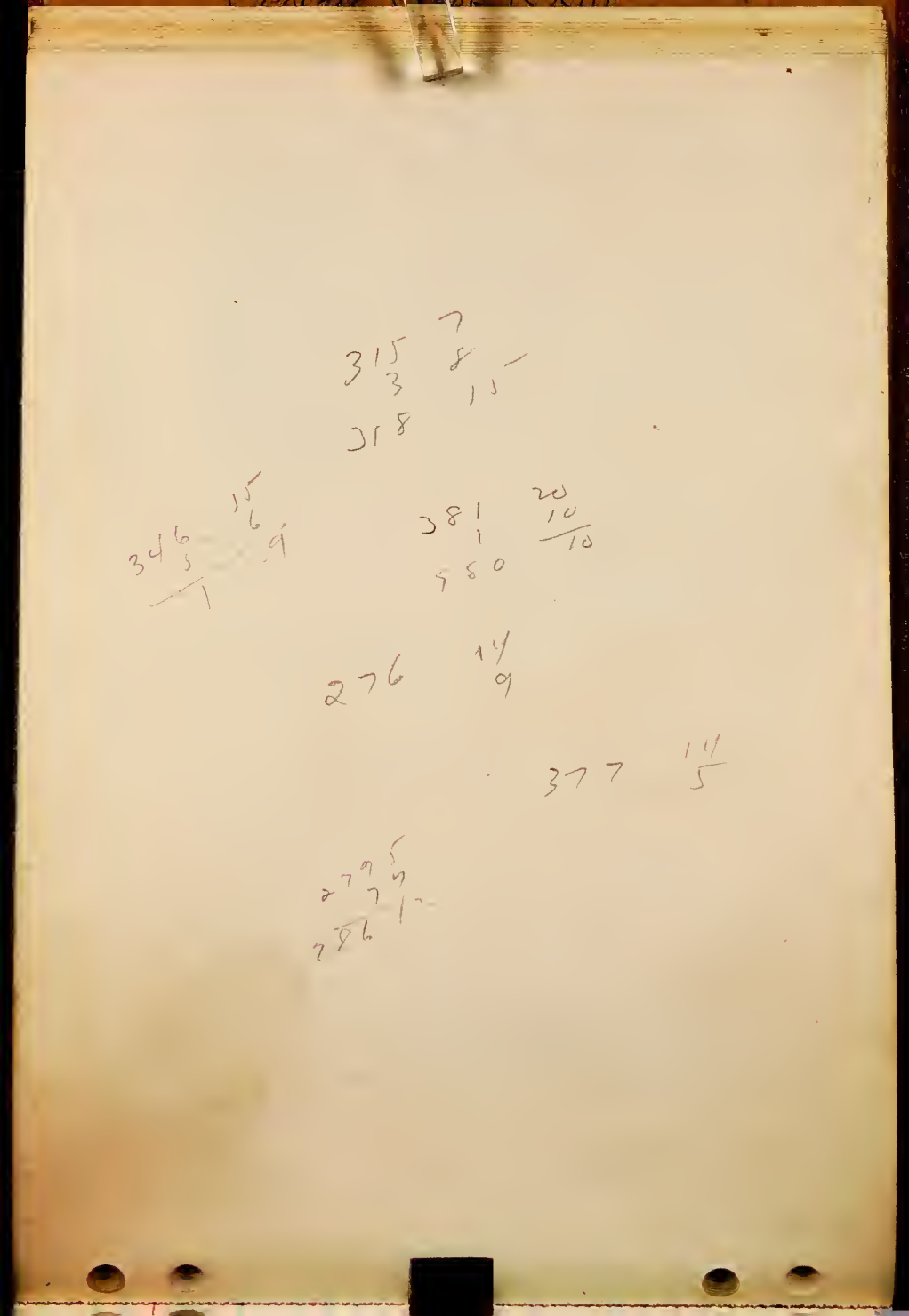
254-6 light gray slightly silty claystone. Few calcareous streaks.

260 Light gray laminated siltstone. Sporadic slimy portions increasing in frequency with depth.

261-6 calcareous siltstone

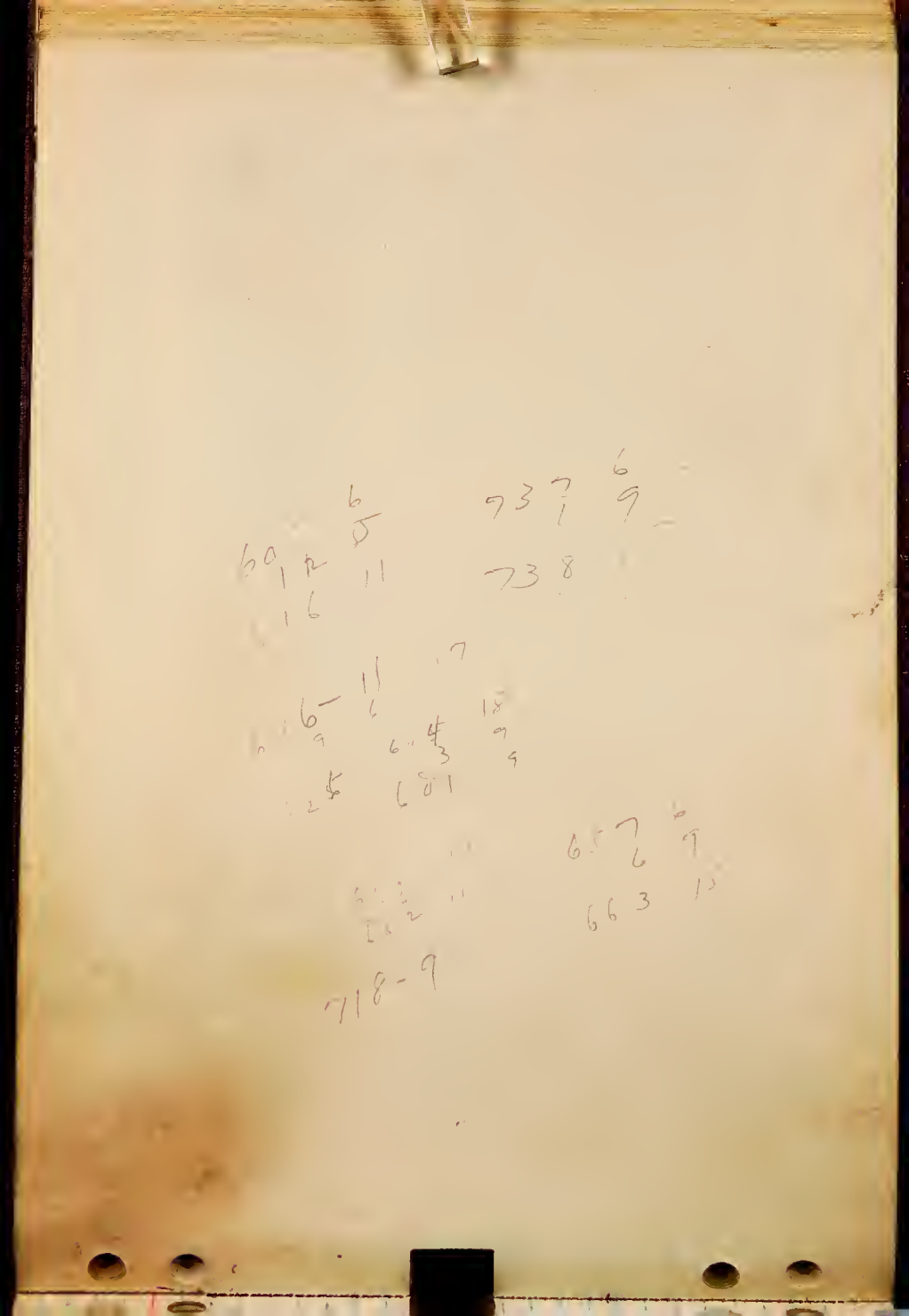
269-7 light-colored siltstone

268 dark brown sh-gray laminated siltstone micaceous on fracture surfaces. Last foot darker and shaly.



268-5	calcareous siltstone.
276-5	dark gray to black shaly siltstone.
277-2	dark brownish-black to black carbonaceous shale.
279-5	COAL.
281-5	dark gray silty claystone - quite porous texture - Abundant nests of pyrite
287	dark brownish-gray claystone. Calcareous in upper 1½'.
288-4	calcareous "bastard" clay
295	dark gray siltstone - calcareous in top 1 foot.
317-3	light gray siltstone, limy in few places in lower portion quite coarse-grained.
323-7	dark brownish-black to black siltstone. In places approximates a silty claystone. It is shaly in parts.
332-8	Brownish-gray to black shaly siltstone. Fragments of plants throughout. Last foot is much laminated due to coarse sandy stringers and pyrite. It is carbonaceous
333-7	COAL
341-9	dark brown carbonaceous "bastard clay.
345-3	dark gray coarse-grained siltstone
352-10	dark brown to black "bastard" clay
364-9	light gray silty claystone in parts a siltstone. Sporadic 2 to 4 inch calcareous streaks
377-9	dark gray (with dark laminations) silty claystone.
382-10	white ~~coarse-grained siltstone or~~ fine-grained sandstone. ~~Laminated at top with laminae coal or coal in place.~~
383-1	calcareous ~~coarse grained siltstone~~
390-10	dark gray to black ~~fossiliferous~~ limestone - Some sections more fossiliferous than others.

393 dark gray siltstone
400 dark gray to black claystone slickensides. Silty in lower part.
403 light gray laminated siltstone showing horizontal slickensides along which limy films deposited.
413-7 dark grayish-brown, closely-laminated silty claystone to siltstone.
414-2 black carbonaceous shale.
415-7 COAL
421-10 dark brownish-gray argillaceous limestone
429-2 light gray limestone with sparry limey inclusions
436 cream to tan limestone with rounded argillaceous inclusions
439-1 light gray and white laminated coarse siltstone
450-5 dark gray siltstone.
453-5 light green to gray fragmental limestone
462-1 pink to red argillaceous limestone with scattered fragments.
~~464-6~~ light gray siltstone with limy films on surface.
482-2
485-8 dark-gray silty claystone
489-11 light-gray siltstone with calcareous patches.
492-5 dark gray silty claystone with fragments of fossils
498-5 white laminated siltstone
505-9 COAL
506-6 carbonaceous siltstone
513-5 gray siltstone, limey stringer
522-7 gray silty claystone
526-7 dark to light gray siltstone
528-11 light gray to tan argillaceous limestone
535-3 black silty claystone



538-5 COAL
544-8 black carbonaceous shale. Fissile.
545-2 COAL
547-9 black claystone - much slickensided. Lightened from more calc. & ? laminations.
561-5 limestone with white calcareous inclusions
565-9 claystone
566-6 "bastard" clay
570-9 gray silty claystone
571-10 "bastard" clay
577-8 light greenish gray claystone, ? a few ? very small blk. slickensides
585-1 light greenish-gray siltstone
581-4 grayish-white siltstone
601-9 gray and white laminated siltstone
607-9 white medium gray siltstone
619-11 medium gray to white finely laminated micaceous siltstone
625-3 limestone - gray
632-10 gray calcareous siltstone
637 dark gray siltstone
652-10 fossil ? limestone ?
656 black argillaceous ? limestone
656-10 black carbonaceous shale - blue ?
657-6 COAL
663-6 dark gray calcareous clay & clay ? limestone pellet.
677-6 interbedded siltstone & shaly siltstone, some shaly claystone.
679 Gray bastard clay
680 Limey claystone grading to argillaceous limestone.
700-8 interbedded shaly siltstone and fine sandstone.
704 Fragmental silty claystone, ~~fragments~~ fragments & pellets of limestone in upper 2'

707	Silty clay stone & siltstone, coaly shale at base
711-4	Silty clay stone grading to siltstone, fragmental in middle part
713-4	Limestone
719	Silt, clay & clay stone
721-6	Limestone
723	Ferruginous sandstone, locally fragmental, clay.
745	Siltstone, with lenticular sandstone.
753-5	Sandstone, beds of siltstone
754-3	Carbonaceous clay stone
756-9	COAL
761	Silty, ca[illegible] & clay stone, limy pellets, grading to argillaceous limestone.
773-9	Silty gray clay stone, locally carbonaceous,
776-5	Dark gray shaly clay.
786	Gray siltstone
789	Silty gray shale
793	Limy silty, interbedded siltstone & clay stone, siltstone and fine sandstone
800-6	Siltstone banded clay grading to siltstone
802-6	Limy clay stone & argillaceous siltstone
463-6	Fragmental limestone, limy clay and clay stone (GC 261)
506-8	Siltstone and silty shale, and [illegible] clay, ferruginous. Limonite.
525	Siltstone and siltstone & [illegible] sandstone, bottom weathered dark brown.
590-6	Medium grained sandstone. (A. starts at 252 ft) Fractured near base.
590-7	Coal
597-6	Fine to medium grained sandstone, [illegible]
605-1	Siltstone, [illegible]
701-10	Coal
912-1	Silty shale, clay & siltstone, [illegible]

927-3 dark laminated and interlaminated dark siltstone and light buff siltstone

935-3 Passing to black shale with 3/4" of coal at base.

944-11 clotted dark medium grained sandstone

946-2 Dark shale.

947-6 Fragmental siltstone and sandstone

950-10 Silty sandstone and siltstone

952-4 Fragmental flint and sandstone

953-4 Sandy siltstone.

955-5 Calc. silty claystone and sandstone

Coaly streaks at top.

Fine grained sandstone, [illegible] grained, [illegible] by coaly streaks in band 4"

1011-1 Coal and shale

1011-8 Conglomerate

1018-6 Interbedded clay siltstone and sandstone

1022 Fine grained unconsolidated sandstone

1023-1 Coal and shale

1027 Silty clay and sandstone grading to siltstone

1038 Dark banded and interlaminated siltstone and fine sandstone

1039-7 Dark gray to black shale

1040-10 Bone with coal streaks.

1050 Dark gray to medium gray claystone grading to siltstone.

T.D. 1050

Fd 161 #

34

0 – 12	Overburden
12 – 31	Fine to medium SS, shale pebbles part
48	Siltstone, clay + clay shale, limey pebbles, fossils, silty in lower part
56-2	Argillaceous siltstone
69	Interbedded siltstone + ss
94-6	Main ground SS.
95-3	Lt gray shale, plastic, calc
96-7	Coarse grained SS,
99-3	Dk gray shale, plastic, calc
115-5	Platy to massive silty limestone, fossiliferous, calc. pebbles
121	Silty to sandy, cryptocrystalline limestone, calc. stringers
123-4	Shaly siltstone, grading to SS with coaly plugs (flowers) SS
125-8	Coal, lt brown, pyrite nodules
150-1	Coal + black shale, plant remains — some silt streaks in middle part
~~150-1~~	
151-5	Coal
166	Gray claystone + kaolinitic clay — limy pebbles, mineralized in lower part (fossils)
168-1	Limestone (pisolitic)
173-8	Claystone, limey pebbles + stringers
190-9	Silty shaly claystone, [illegible] zone of shaly material [illegible] base
203-0	Interbedded shaly siltstone + fine SS, grading back to clay
219-5	~~[illegible]~~ clinkered, fired, baked + silty SS.
250-4	Thick + fine SS
260	clayey, interbedded siltstone + claystone
264-8	Dense siltstone

272-10 Black shale marine fossils
274 Coal
275-1 Carb silty clay stone
300-4 Gray calc Clay stone with lime pellets & (interbeds argill. limestone in upper part)
306-9 Mottled green and gray clay & clay stone many fossils
321-4 Gray clay stone, limestone nodules & ~~very~~ very hard brown base
329-6 Gray argillaceous siltstone, limestone nodules
340-6 Shaky siltstone interbeds ~~angle~~ fine SS
355 Silty clay stone & siltstone, limestone nod.
360 Dark gray silty clay, carb streaks & pyrite pellets (B)
~~383~~ Lumpy pyritic gray clay stone bed argill & silty
375-6 Gray and dk gray clay stone limestone nodulous & fossil
383 Light gray shale, siltstone ~~and~~ & to silty shale, sandstone platings in lower part,
393-6 Black silty shale at top, some 3/4 black fissile shale
395-7 Coal
402 ~~Shale~~ gray & light gray fractured clay, limey inclusions & nodules part.
422-5 Interbedded ~~sandstone~~ shale clay shale and siltstone
437-2 Mottled red & grey shale clay, ~~clay~~
461 Interbedded ~~red~~ siltstone and fine sandstone
461-6 Fossiliferous (marine) gray shale.
468-4 Mottled red & gray clay limestone pellets & nodulous
485-6 Gray siltstone, sandy in lower part
498-4 Med. gr. SS.
506 Gray siltstone
520 dark gray silty shale ~~and~~ siltstone
538-11 Dark gray & black shale full marine fossils

540-7	Coal
542	Gray plastic clay
560-9	Gray clay + claystone limestone inclusions
565-2	Siltstone, sandy in lower half.
575-6	Gray + dk gray plastic clay strong changes in hues at base
580	Light gray gray claystone, limestone inclusions
595-1	Grayo green gray plastic clay zones ironstone
606-8	Siltstone, green to gray +
609-8	~~Sandstone, mixed~~ Upper part interbed siltstn + fine ss, lower half med. ss.
611-4	Gray shale
619-6	Interbedded siltstone + ss
624-3	Black shale
624-10	Coaly zone
630	Gray silty clay. claystone
652-5	Interbedded dark siltstn, silty + shale and white sandstone.
654-3	Dk gray ~~to blk~~ to carb shale
657-8	Coal
658-4	Dk gray claystone
663-3	Argillaceous limestone
667	Gray + light brown sandstone + sandstone clay fragmental zone, wet + locally muddy interbedded sand + ss shales
671	Gray argillaceous siltstone
680-6	Interbedded light gray siltstone + fine sandstone
682-5	Fragmental siltstone + silty claystone
699-4	Gray siltstone, ironstone zones silty clay.
713-2	Interbedded siltstone + fine ss
714-2	Dk gray to carb shale
714-9	Coaly claystone
717-2	Dark to light gray micaceous clay + fine fragmental zones and inclusions limestone in lower part
	~~Coal + clay + clay stringers~~

729-9
12
777

719-1	Dark to light gray semiplastic clay zone fragmental remnant at base calcareous carbonaceous material.
721	Siltstone and sandstone.
724-1	~~dark brown~~ Sandstone micaceous siltstone interbeds
729-9	Gray to black shale silty streaks.
732-4	Coal
735	Argillaceous ss.